IN THE CLAIMS:

1. (Currently Amended) A fluid controlling assembly for use in a direct oxidation fuel cell, which fuel cell has an anode chamber and a cathode chamber, the assembly comprising:

_____an adjustable component at least a portion of which is disposed within the cathode chamber of the fuel cell, and said component, when adjusted, regulates the rate at which fluids travel into and out of the cathode chamber of the fuel cell, wherein the adjustable component has a first component and a second component that each include corresponding apertures, and the first and second components are lined with a gas permeable, liquid impermeable film that controls the rate of flow of oxygen therethrough to control the cathode reactions, yet restricts the flow of liquid water therethrough such that humidity is maintained within the cathode chamber.

2.-6. (Cancelled)

7. (Currently Amended) A fluid controlling assembly for use in a direct oxidation fuel cell, comprising:

(i) a first component that includes an aperture disposed in a cathode chamber of the direct oxidation fuel cell; ~~and~~

(ii) a corresponding second component such that placement of the first component relative to the second component results in an opening that permits the flow of fluids therethrough, and when closed restricts the flow of fluids into the cathode chamber, wherein the first and second components are generally planar components that include corresponding apertures, which when aligned create openings and the first and second components can be adjusted relative to one another to control the rate of fluid flow through the openings; and

(iii) the apertures of the first and second components are lined with a gas permeable, liquid impermeable film that controls the rate of flow of oxygen there-

through to control the cathode reactions, yet restricts the flow of liquid water therethrough such that humidity is maintained within the cathode chamber.

8. (Cancelled)

9. (Cancelled)

10 (Original) The fluid controlling assembly as defined in claim 7 further comprising a control system for variably actuating the position of at least one of said first and second components of said fluid controlling assembly.

11.–26.(Cancelled)

27. (Currently Amended) A fluid controlling assembly for use in a direct oxidation fuel cell, which fuel cell has an anode chamber and a cathode chamber, the assembly comprising:

an adjustable component at least a portion of which is disposed within the cathode chamber of the fuel cell, and said component, when adjusted, regulates the rate at which fluids travel into and out of the cathode chamber of the fuel cell to regulate hydration of a catalyzed membrane located at a boundary between the anode chamber and the cathode chamber, wherein the adjustable component includes a first component and a second component that each include corresponding apertures, and said apertures of said first and second components each are lined with a gas permeable, liquid impermeable film that controls the rate of flow of oxygen therethrough to control the cathode reactions, yet restricts the flow of liquid water therethrough such that humidity is maintained within the cathode chamber.

28. (Cancelled)

29. (Previously Presented) The fluid controlling assembly of claim 27, wherein the fluid is water or water vapor.

30. (Previously Presented) The fluid controlling assembly of claim 27, wherein said fluid is oxygen or air, and said component is adjusted to reduce dry out of said membrane.